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various Molluscs are found to contain acids, enabling them to bore in rocks. *Pholas* is known to bore into gneiss (stratified granite). Two boring worms, *Leucodore* and *Sabella*, which bore cavities in limestone rocks, also contain acid. — Mr. Flower thinks there is but one species of Sperm Whale.

NATURAL HISTORY MISCELLANY.

BOTANY.

THE LONG MOSS OF THE SOUTH (*Tillandsia usneoides*).—In a recent number of the NATURALIST Dr. Asa Gray inquires whether this is really an Epiphyte, and gives some reasons for a suspicion it may probably be a parasite. Several times I have had fresh specimens, and fastened them on blocks,—dead blocks of course,—just as we do with Epiphytæ, Orchidæa, and had them grow as healthily as in their natural state. One I left in the Orchidæa house, at Springbrook, near Philadelphia, some years ago, had then been eighteen months on the block, and I believe was amongst the lot sold at public sale two years afterwards. Many *Tillandsias*, and allied genera, grow nearly as well on blocks in Orchidæa houses, as in the earth. — THOMAS MEEHAN.

In the hope of throwing some light on the question raised by Professor Gray, in the February number of the NATURALIST, I offer the following facts, which fall under my daily observation, attempting, however, no explanation.

1. The Long Moss, or Spanish Moss (*Tillandsia usneoides*), grows abundantly and luxuriantly on the dead branches of our live-oaks, and other trees, but when these dead branches fall to the ground, it soon dies.

2. On a tree near my house, which has been entirely dead for more than a year, there is a thrifty growth of this moss.

3. I often find it simply hanging by a loop to a twig, or a projecting point of bark, and still growing vigorously.

4. On fallen trees, even on those recently cut down, I find it generally, but not always, withered and dead. — D. H. JACQUES, *Glen Evergreen, Jacksonville, Fla.*

LONG OR BLACK MOSS (*Tillandsia usneoides*) ONLY AN EPIPHYTE.—Concurrent testimony from several quarters makes it clear that *Tillandsia* does not perish on cutting down the tree that supports it, and that it thrives as well on dead as on living trees. Our original informant must therefore have been mistaken. — A. GRAY.

ANOMALOUS FLOWERS OF THE WILLOW.—There is a species of Willow (*Salix*) growing near here which has for two seasons borne the above

anomalous flowers, either a double ovary or two single ones appearing above each scale. Gray, in his Manual (p. 416), mentions a "transformation of anthers into imperfect ovaries" as common in *S. rostrata*, and occasional in other species; but this specimen has not the "yellow scales" nor the "prominently veined" leaves of that species, it is more like *S. humilis*; and besides, if this is such a transformation, and the duality of the organs seems to indicate that it is, it is a *complete* one; no intimation, excepting the duality, existing which may point to the stamens as their origin. The ovaries are full-sized and perfect, and the embryos well developed. I have specimens of the above, and also of *Arethusa bulbosa*, *Woodwardia angustifolia*, *Lycopodium inundatum*, *Draba verna*, and a few other scarce plants, which I should like to exchange for scarce plants which I have not. I should like also to correspond with two or three young botanists for the purpose of more general exchange. — W. P. BOLLES, Box 356, New London, Conn.

COMPARATIVE FLORAL CALENDAR, CASS COUNTY, MISSOURI.—

Peucedanum	in bloom,	Mar. 23, 1868.
Isopyrum bitermum	"	Apr. 21, 1864.	Apr. 19, 1867.	Mar. 24,	"	
Viola pubescens	"	Apr. 21,	"	Apr. 19,	"	Mar. 28, "
Erythronium albidum	"	Mar. 29,	"	Apr. 2,	"	Mar. 28, "
Astragalus caryocarpus	"	Apr. 27,	"	Apr. 28,	"	Mar. 28, "
Peach	"	Apr. 27,	"	Apr. 20,	"	Mar. 31, "
Antennaria plantaginifolia	}	Apr. 27,	"	Apr. 19,	"	Apr. 1, "
Strawberry		May 2,	"	Apr. 20,	"	Apr. 2, "
Viola cuculata	"	Apr. 14,	"	Apr. 19,	"	Apr. 1, "
Phlox divaricata	"	Apr. 29,	"	May 7,	"	Apr. 2, "
Claytonia Virginica	"	Apr. 14,	"	Apr. 15,	"	Apr. 2, "

G. C. BROADHEAD.

WHITE WILD COLUMBINES, ETC.—In the April number of the NATURALIST, Mr. Millington mentions a white Columbine. I would state that I, also, have seen white columbines (*Aquilegia Canadensis*). During last summer I saw a very pretty white *Lobelia syphilitica*. I have also seen white flowered plants of the common ironweed (*Vernonia Novboracensis*). — G. C. BROADHEAD.

IS THE ELDER A NATIVE PLANT?—In answer to inquiries as to the nativity of the Elder (*Sambucus Canadensis*) I would say most positively, that it is as much a native of the United States as the oak or elm. My father being one of the first settlers of Illinois, the elder was used for making spiles for tapping maple trees, and in the years 1857 and 1858, I explored a considerable part of Northern Kansas, which was then in its wild and primitive state, and the elder was always present in the valleys in connection with the wild plum, choke-cherries, etc. The elder is more plentiful in Kansas than in Illinois, and was before the white man became possessor of the soil. — WM. J. McLAUGHLIN.

FLOWERING OF THE "GERMAN IVY."—In the March number of the NATURALIST is a communication on "German Ivy," and its "flowering under peculiar circumstances." The description given by Professor Gray is certainly very interesting and remarkable. Allow me to state that if this plant is taken in the spring and placed in the ground without a pot, then transplanted to a pot in the fall and cut down close to the roots shortly after the appearance of new shoots, flower buds, and flowers will follow. I send with this specimens of this plant which has been treated in this way, and so successful has it been, that efforts to *prevent* the plant from *blooming* have been *unavailing*, so *vigorously* does it *flower*. Is there an explanation possible why this plant and others of different species should blossom so profusely after such severe pruning?—JAMES L. LITTLE, JR.

A VARIETY OF THE COMMON AGRIMONY.—A variety of the common agrimony (*Agrimonia Eupatoria*) is occasionally found in this vicinity, having nine leaflets instead of seven, which is the usual number. In all other respects it appears to be identical with the ordinary form, except that it is, perhaps, a little taller, and occurs in rather more swampy localities.—T. MARTIN TRIPPE, *Orange Co., N. Y.*

ZOÖLOGY.

HOW SPIDERS BEGIN THEIR WEBS.—Early in the spring of 1866, while arrangements were making for photographing a live male of the *Nephila plumipes* (the so-called "Silk Spider of South Carolina"), the spider, after having several times traversed the circle of wire on which it was, suddenly stopped, took a firm position at the top of the frame and lifted the abdomen, pointing it toward a large skylight which occupied the middle of the ceiling: a slender, shining thread was seen to shoot forth from the spinnerets which occupy the end of the abdomen; it seemed to have a blunt, rounded extremity, which advanced through the air rather quickly for a few inches, but afterward more slowly and steadily, and with an upward tendency, but always in the direction of the skylight. When it had reached the length of five or six feet, I allowed it to become attached to my coat; the issue ceased at once, and the spider, having attached the end of the line, turned about and began to pull upon it. I now broke it off near the wire, and, believing that there was a current of air toward the skylight, I blew gently upon the spider from various directions, and found that it always pointed her abdomen in the direction in which I blew, and that the thread was emitted in the same direction. So that while it seemed to have the power of projecting a thread for a short distance, yet it always availed itself of the prevailing current of air.

This single instance by no means proves that all spiders do or can employ this method of bridging over spaces, and it may be that on ordi-